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PHOTOGRAPHIC
INTERPRETATION
REPORT

NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER

POSSIBLE SS-NX-12 TEST PROGRAM AT LENINGRAD SOLID MOTOR TEST FACILITIES 2 AND 3, USSR

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INSTALLATION OR ACTIVITY NAME	COUNTRY
Possible SS-NX-12 Test Program at Leningrad Solid Motor Test Facilities 2 & 3	UR

UTM COORDINATES	GEOGRAPHIC COORDINATES
NA	60-12-32N 030-42-00E 60-15-30N 030-44-30E

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MAP REFERENCE

ACIC. US Air Target Chart, Series 200, Sheet 0103-25, scale 1:200,000

	NEGATION DATE (If required)

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ABSTRACT

1. A possible SS-NX-12 naval cruise missile was sighted at Leningrad Solid Motor Test Facility 2 [redacted] Crates for the missile, which appear identical to SS-N-3 crates, were observed at both Leningrad Solid Motor Test Facilities 2 and 3 between June 1969 and July 1972. Fresh hot-fire blast marks were observed at both test facilities on four occasions during 1972.

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2. Photographic evidence suggests the following conclusions: (1) the SS-NX-12 has been tested at Leningrad Solid Motor Test Facilities 2 and 3 since mid-1969; (2) the SS-NX-12 has a solid propellant booster; (3) the SS-NX-12 missile is transported in a crate apparently identical to the SS-N-3 crate; and (4) either there is an on-going program of SS-NX-12 acceptance testing or there have been problems with the missile requiring continuing testing.

BASIC DESCRIPTION

3. There has been evidence of possible SS-NX-12 testing at both Leningrad Solid Motor Test Facilities 2 and 3 (Figure 1) for the past three years. Test facility 2 appears to be involved primarily with testing of an integrated propulsion and airframe system, while test facility 3 has been involved with static testing of solid propellant rocket motors.

4. Table 1 provides a summary of possible SS-NX-12-related events observed at Leningrad Solid Motor Test Facilities 2 and 3, and at Launch Facility A, Nenoksa Missile Test Center between September 1967 and July 1972. A possible SS-NX-12 test program began at test facility 2 between March 1968 and June 1969, during which time a drop-test

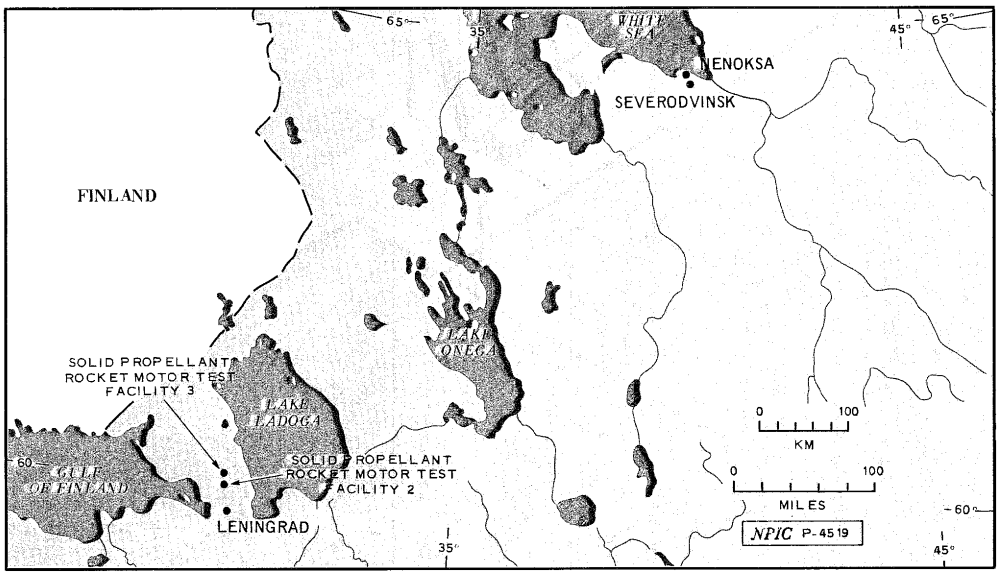

FIGURE 1. LOCATION MAP

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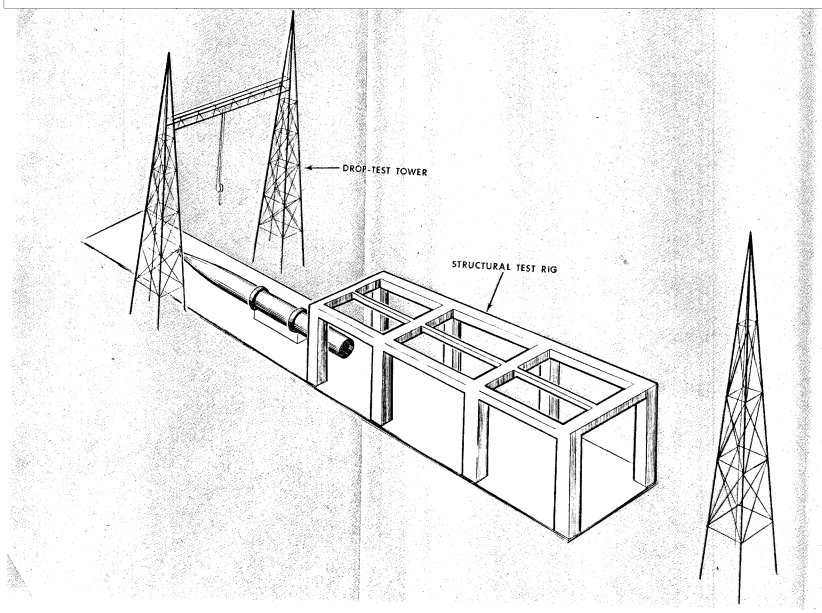

FIGURE 2. INSET A - DROP-TEST TOWER USED TO SIMULATE MISSILE-HANDLING ACCIDENTS; STRUCTURAL TEST RIG USED TO TEST STRESSES AND LOADS ON THE MISSILES

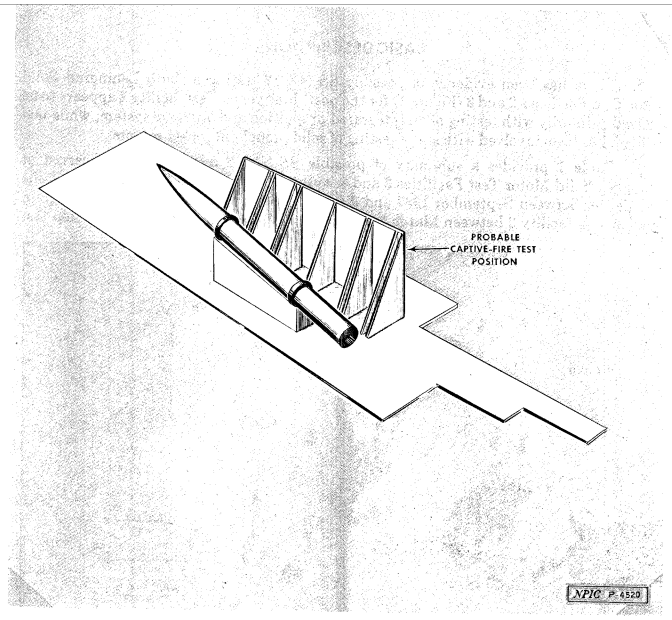

FIGURE 2. INSET B - PROBABLE CAPTIVE-FIRE TEST POSITION USED TO TEST EFFECTS ON THE MISSILE SYSTEM WHEN THE BOOSTER IS FIRED.

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tower, a structural test rig, and a probable captive-fire test position were completed and a possible SS-NX-12 crate was observed beneath the drop-test tower. Provisional drawings of the drop-test tower, the structural test rig, and the probable captive-fire test position are provided in Figure 2.

5. A possible SS-NX-12 missile has been observed on two occasions at test facility 2, once on photography of August 1971 (Figure 3) and again in July 1972 (Figure 4). The best dimensions of the missile were obtained from the August 1971 photography, indicating the possible SS-NX-12 missile to be 12.0 meters (39 feet) long and 1.0 meter (3 feet) in diameter. These measurements are similar to those of a possible SS-NX-12 missile observed at Launch Facility A, Nenoksa Missile Test Center 25X1

6. If the missile which has been undergoing tests at test facility 2 is the SS-NX-12, then the SS-NX-12 has a solid propellant booster. Only solid rocket motors are tested at test facilities 2 and 3. Therefore, it follows that the integrated missile airframe observed at the probable captive-fire test position (Figure 4) had a solid booster. 25X1

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8. Test activity was observed at test facility 3 during the same 1969-to-1972 time period during which possible SS-NX-12 activity was observed at test facility 2. A possible SS-NX-12 crate was seen at test facility 3 and new blast marks 25X1 have been seen there on several occasions during the 1969-to-1972 time period (Table 1 and Figure 7).

9. The possible SS-NX-12 activity observed at test facilities 2 and 3 25X1 may be a part of an on-going program of SS-NX-12 acceptance testing, or it 25X1 also is possible that there have been problems with the SS-NX-12 requiring continuing testing of the missile. The apparent emphasis on structural testing of a combined

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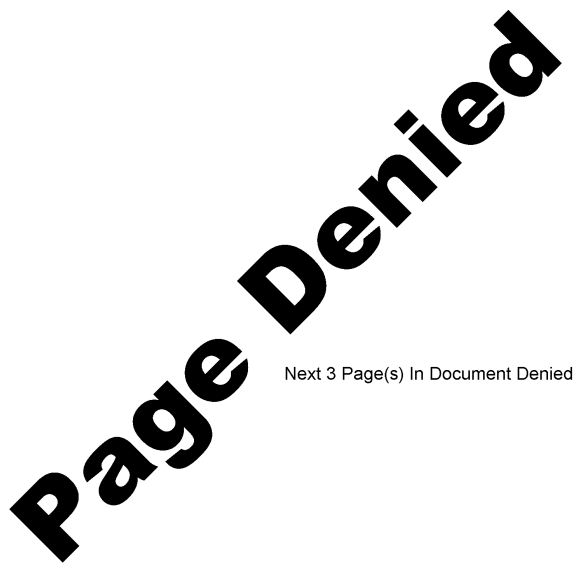

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TABLE 1. Possible SS-NX-12-Related Events

Leningrad Solid Motor Test Facility 2	Nenoksa Missile Test Center	Leningrad Solid Motor Test Facility 3 25X1
Drop-test tower and structural test rig ucon	--	--
Drop-test tower and strucutral test rig complete	--	--
Prob captive-fire test position complete	--	--
Poss SS-NX-12 crate beneath drop-test tower	--	Fresh blast mark at test postition 2
--	Elevated platform to support blast deflector added to poss SS-NX-12 launcher; SS-N-3 cruise missile blast deflectors observed for first time at Launch Facility A	--
--	New cruise-missile launch tube apparently installed on poss SS-NX-12 launcher at Launch Facility A	--
--	--	Fresh blast mark at test position 3
Poss SS-NX-12 missile and crate at drop-test tower	--	--
Poss SS-NX-12 crate near drop-test tower; first blast mark at prob captive-fire test position (Fig 2)	--	--
--	Poss SS-NX-12 missile at Launch Facility A (Fig 4)	--
Poss SS-NX-12 missile beneath drop-test tower and structural test rig; poss SS-NX-12 crate nearby (Fig 7)	--	Poss SS-NX-12 crate near vibration and structural test bldg (Fig 6)
--	--	Fresh blast mark at test position 3 (Fig 7)
--	--	Fresh blast mark at test position 3
Poss SS-NX-12 missile at prob captive-fire test position; fresh blast mark at test position 5 (Fig 5); poss SS-NX-12 crate near prob captive-fire test position	--	Fresh blast mark at test position 3 (Fig 7)

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propulsion system and airframe at test facility 2 may be an indication that the missile uses a new propulsion concept requiring repeated tests. One possibility would be a propulsion system similar to the air-launched, low-volume, ramjet-powered (ALVRJ) missile under development for the US Naval Systems Command.[1] That missile, a naval standoff penetration tactical missile, will use a solid propellant booster. At the termination of the booster burn, the empty motor case will be used as a combustion chamber for a ramjet-powered sustainer.

REFERENCES

MAPS OR CHARTS

ACIC. US Air Target Chart, Series 200, Sheet 0103-25, Dec 71, scale 1:200,000

DOCUMENT

1. *Aviation Week and Space Technology*, "Navy Testing New Missile", 14 Sug 72, p. 38 (UNCLASSIFIED)

REQUIREMENT

NPIC/IEG/SD/SIB Project 120302ND